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 Text w/Tape:
 INAME: CANINE, Ralph J., LT GEN, USA (Retired)
 IPLACE: NSA, Ft. Meade, Maryland
 IVIEWER: --DAVID, Stephen L (Steve)., Moderator; --
 DAVIS, John J. (Jack), LT GEN, USA; --
 NEFF, Paul E.; --
 BUFFHAM, Benson K. (Buff)

U/I Female: ((TR NOTE: Constant static noise can be heard in the background during the first 24 minutes of audio.)) With us today to talk to General Canine are: Lieutenant General John Davis, United States Army, former Assistant for Production, NSA; and now the Assistant Director of the Weapons Evaluation and Control Bureau, Arms Control and Disarmament Agency; Mr. Paul Neff, Assistant Director, National Cryptologic Staff; and Mr. Benson K. Buffham, Deputy Assistant Director for Production ((NSA)). Acting as moderator for today's program is Mr. Stephen L. David, Deputy Commandant of the National Cryptologic School. Mr. David?

David: In this session, we thought we'd take up some of the more dynamic decisions that you made during your era. I said "era."

Canine: Mm hmm.

David: And one of the big things I remember, and so does Benson Buffham: the decision to decentralize some of the problems to the field. Buff, why don't you describe a little bit of this concept, huh?

Benson: Well, certainly, one of the major effects of the establishment of the National Security Agency as opposed to the Armed Forces Security Agency was the change in responsibilities of NSA and the direction and control of all of the units in the field.

So, one of the primary initial acts—which General Canine directed—was the...first of all, a series of discussions with the Services. And as I recall, the NSA side was headed up by Jeff Dennis. He was our principal architect in the discussions with the Services—or the Service Cryptologic Agencies—of the...sort of the ground rules which would be in effect between NSA and the various Service installations in this respect.

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And then, the second major thing that was done was a reorganizational change in NSA in the Production element—wherein a field operations group was set up under Herb Conley and Hank (B% Herzog), with an appropriate staff, to make sure that NSA's actions with regard to the field were properly managed and carried out. The big thing that was done, of course, in this whole operation was to assign definite processing, analytic, and reporting tasks to all of the stations in the field. Had to make sure that these tasks complemented what was going on back in the... in the national center. And of course, this regar... this required an extensive review of just what activities should be conducted in the field; and then the drawing up of a systematic means of applying these tasks. And I guess this is really... And I think this was primarily the brainstorm of Hank Herzog, where we devised the whole MUSSO system.

David: Why did we even decide to decentralize? Why couldn't we have just done all of that here, of...?

Buffham: Well, I think one of the principal things...

David: Remember...

Buffham: General Canine will probably want to say something on this—was the Korean War and the necessity then of making sure that we had a capability at the stations to analyze and report the material being collected--that the... for the need to get timeliness in the reporting.

David: (4-5B).

Buffham: And I think of that... Wasn't that the time, General Canine, when you directed that every intercept station would have a capability to report—particularly the CRITICs? We had... never had that at the stations before. ((Acknowledgements heard.))

Canine: We never had that at the stations before. I used to go into the station, and they didn't know what I meant.

U/I Male: (Buffham?) Didn't you call...? Didn't you coin: "the old newspaper... yesterday's newspaper..."? Either you did or somebody did, I understand.

Canine: Yeah, well, it was...

Neff?: "Yesterday's... As old as yesterday's newspaper," I remember that.

Canine: Yeah.

Davis?: Yeah, and the need for a quick reaction capability, as Buff said, to respond to the field commander is...

Canine: The Korean War was still going on.

Buffham: Mm hmm.

Canine: And every time I'd go into one of the commanders out in the field, they'd complain, and we had to something about it. It was just that simple. And

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we had to get all of the Services in because they... many of the stations they owned. Well, *all* of them, at that point in time, they owned. So there wasn't any problem about it. We just had to write new requirements.

Davis: Part of this may stem to a story General Canine told me when he was logistics commander over in Europe before he ever came to NSA. And he went around to a COMINT station and knocked on the door to see what they were doing. They wouldn't let him in. ((Chuckling heard.)) So he said... Well, instead, he called for the colonel in the command, and he said, "Well, Colonel, the next time you want some beans, come around and let me know what you're doing." ((Laughter heard.))

U/I Male: Sure, it's...

Davis: He was quickly read on.

Buffham: But there had been this phase when the units in the field were restricted almost solely to collection and... after World War II ended.

U/I Male: Yeah.

Buffham: And it was the Korean War, as General Canine has stated, brought home very emphatically the need to have a processing... a reporting capability at every one of the stations in order to exploit immediately that material which could be exploited and was valuable for use right there, as well as back in the Washington area. We used field-produced product at all levels in producing COMINT information.

And this group that was set up under Conley and Herzog developed these decentralized tasks, as we called them, for each of the stations. And working very closely with the SCAs, developed this structure for the assignment of these missions and the necessary procedures and... Of course, one of the big things was to get the necessary flow of technical support from NSA out to the units...

David: Back there (1-2B by someone clearing his throat).

Buffham: Because without the technical data flow, the capability of the stations to do the kind of reporting on their collection that was necessary was extremely difficult. And it was hard to energize some of these NSA elements to remember the field and to get the data out to them so they could do a good job.

David?: A callsign change would really foul everybody up when... until we, here, developed the callsign and then sent it back out there again.

Canine: I should say it did. ((He laughs.))

Buffham: It was a fairly traumatic experience for some people in PROD, as you said. And the General got his whip out...

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David: Do you think that's the biggest decision we made as far as policy goes?

Canine: I expect...I... Oh...

Neff: I think it's a major breakthrough in (2-3B)...

Canine: That was a major breakthrough. We put the heat right on the guys where the heat ought to be put. ((Laughter heard.)) There, and in the field.

Buffham: ((More chuckling heard.)) I was going to say General Canine put a lot of heat on us right here. ((Laughter heard.))

Davis?: Sure did! ((More laughter.))

David: I can remember the first field commanders conference that we had that you called. And I think you gave PROD prime action. I think you started that.

Buffham: (XB). (Several speakers talking simultaneously).

David: And this is where you were trying to get everybody to act like a big family, rather than individual services and NSA. Benson remembers that one real well, too.

Canine: We had kind of a hard job doing that, too. ((Laughter and acknowledgements heard.)) It was not exactly joyously received. ((More chuckling heard.)) But they got over it.

Buffham: But I think that that first commanders conference had a tremendous impact on the...

David: The whole...

Davis?: It was. It was the first time everybody (XG).

U/I Male: The whole (1-2B), yeah.

David: First time I've ever seen Benson red in the face for one hour continuously. ((Laughter heard.))

Buffham: See, I don't remember that side of it. ((Laughter heard.))

David?: You and (B% Patton).

Buffham?: Oh, it was... It was a big battle.

David: What were the big...? What was it all about? Why... What was the difficulty of...? Prerogatives, wasn't it; the prerogative of having a problem, of being able to run it themselves?

Buffham: Well, I think there were a lot bureaucratic layers that existed at that time, too, that had to be broken through...

U/I Male: Yes.

Canine: Well, I... That's...

Buffham: Both at NSA and in the field.

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- Davis?:** In the field
- Canine:** That's it... That's it exactly. There were bureaucratic layers. They had a problem, and they weren't about to let anybody get in on it.
- Neff:** There are still pieces... remnants of that today. ((Laughter heard.))
- Canine:** I was going to say, I...
- Buffham?:** Yeah, Paul and I are involved in that right now to a certain extent.
- Canine:** My guess is that you can find instances...
- Davis?:** Yeah, lots of it, yeah, I'm sure. You know, (XB by General Canine speaking).
- Canine:** Because it wasn't all gone after those guys went home now by any matter of means.
- Buffham:** This won't come as a surprise to you, but, oh, about two months ago, General Carter held a commanders conference.
- Canine:** Yeah.
- Buffham:** A very small one—just the SCAs and chiefs and their deputies—and four or five people from NSA. But the principle discussion was the concept of SIGINT processing in the field. ((Chuckling heard.)) And as a result of the concern expressed not just by the NSA people but also by the SCA people, we just launched a new study to determine precisely what ought to be done at the station and what ought to be done back here.
- Canine:** It's almost a flashback! ((Laughter heard.))
- David?:** Yeah, this timeframe... Fifteen years, the same problem. Fifteen years, the same problem! ((TR NOTE: Several speakers talking simultaneously.))
- Canine:** I'm not so... I'm not so sure that you ought to have a study. I'm against studies. ((Laughter heard.)) You've heard me talk about this before. I'm against studies. ((He pauses.)) Just tell them!
- David:** Well, how do you know, though? How would you get to know what to tell them?
- Canine:** Well...
- David:** Without somebody coming and saying, "Look, I've looked at this thing. I've studied it. Do this, General,"? How do you get to that point?
- Canine:** Well, sometimes I just go along and ask some guy: "What do I do now?" ((Laughter heard.))
- U/I Male:** Mm hmm.
- Canine:** And then, I'd do it.
- David?:** I think that was one of the big problems...

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Canine: It might have been wrong. I didn't care.

Buffham: But it was something. You did something.

Canine: I did something. ((Laughter continues.)) Any decision was better than no decision.

David: That's right. Right.

Canine?: Well...

David: Well, it's gotten much bigger, you know, since your day. And today, one person... Like Buff, you knew everything. Today, Buff doesn't know everything. ((Laughter heard.)) Am I right?

Buffham: You're absolutely right, Steve. There's no doubt about that.

David: I'm serious. I'm serious. ((Lingering laughter heard.))

Canine: He ought to.

David: He's got history... You know, we can't today. But if you... If you look at the problem today, it's so big. You used to know everybody walking the down hall. Do you remember that?

Canine: Oh, of course; of course.

David: Today, you can't. I don't even know....

Buffham?: Too big.

David: And I have continuity as much as anybody.

Canine: Far enough so that he can... so that the Director can. ((Laughter heard.))

David: Much will be saved, but we don't want cut too much out of this thing. ((More laughter heard.)) We don't want to ((more laughter))...

Canine: Well, you were talking about saving money.

David: Well, we're doing it. We're doing that. We're saving money...

Canine: By having television.

David: By having television, you save money.

Canine: Well, that's what you say.

David: If you can get the word better, clearer, more accurate, maybe somebody... And if it's done through this medium, it is saving money. (B% No longer a...) I wish you hadn't brought that up because it's a tender subject with Tordella and also a few others. ((Laughter heard.))

Davis?: Buff, what did MUSSO stand for in the...?

Buffham: Well, it had... First, it used to be the Manual...

Davis?: Manual...

Buffham: Of U.S....

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Davis?: U.S.

Buffham: COMINT, ah...

David: Operations.

Buffham: ((Simultaneously along with Mr. David:)) Operations. MUSCO.

Davis: Yeah, MUSCO.

Buffham: Then when we...

Davis?: SIGINT...

Buffham: We got the ELINT responsibility back in '58 I guess it was, then it became SIGINT.

Davis?: SIGINT.

Buffham: And they changed it over to MUSSO.

Canine: Well, that's where I left, because it was a naughty word when I was here.

Buffham: Yeah.

David: ELINT?

Canine: ELINT.

Buffham: Yes.

David: Didn't the Brownell Report study deal with that subject at all?

Canine: Oh, I... It's been so many years since I looked at the Brownell Report, Steve, that I don't remember. There was tremendous pressure on the Brownell Committee from the Services *not* to look at it.

David: Mm hmm, mm hmm.

Buffham: ELINT was in its infancy back in that 1958 timeframe.

David: Yeah.

Davis?: Yes. Well...

Buffham: There'd been very little done in ELINT. And I think that if there was... If it was mentioned, Steve, it would have been a pretty... just in passing. The big thing then, and I think the big still today is COMINT—although ELINT's come a long way.

Neff?: E... But ELINT was integrated with command and control, particularly in the Navy...

Buffham: Yes...

Neff?: To the extent that they were...

David: Within the Service (XB by several speakers talking at once).

Canine: And the Air Force...

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Neff?: The Air Force, too. They were very (B% chary) of giving the Director of NSA anything to say about ELINT—even the technical aspects of it.

Buffham: I thought when General Canine said the “dirty word” that...or you... Was it you... that you were talking about MUSSO? ((Chuckling heard.))

Canine: Oh, no!

Buffham: Even that sometimes (1-2B)...

Canine: “ELINT” was the dirty word.

Buffham: Yeah.

David: Yeah, well... Now... General, when you left... General Davis, when you left here, do you feel that when you get back and look at it from another command, that it isn’t really a bad-running organization?

Davis: Oh, no, I...

Neff: You shouldn’t answer that! ((Laughter heard.))

Davis: Well, it all depends on what other job I had, I suppose.

David: Yeah.

Davis: But as you know, I went back into intelligence after I left here. And then came back for a second tour in NSA in ’61.

David: You were head of PROD then?

Davis: Yes.

David: Assistant Director of PROD.

Davis: Yeah, so I’ve seen both sides of it. And one of the... I think one of the most difficult concepts to get across in this whole business has been what I always refer to as the “umbilical cord” concept. In other words, for SIGINT to be meaningful at all in the field or any place else, it had to be tied back to the mother here where the highly technical work could only be done with the computers and advanced cryptanalysts and traffic analysts...

David: Mm hmm.

Davis: That you couldn’t never hope to keep in the field.

David: Mm hmm.

Davis: So this concept of the umbilical cord. And it was a two-way street, and the... I think the two-way street part is where General Canine started the decentralization of COMINT. Before that, it was only one way. Everything was being pumped back into the... to the central office, but it wasn’t really working well on a two-way (B% affair).

David: We’ve never given up technical direction.

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- Davis:** No! No, it's...
- David:** This thing we've jealously guarded because we were the only ones who could do it, (1-2G)?
- Canine:** That's what we said.
- Buffham:** Technical control and delegate... And direction's never been delegated, that's right. Just (1-2B) is.
- Davis:** But nowadays, of course... And this... If the 82nd Airborne, for instance, went off to a place like the Dominican Republic to put out a brush fire... And a platoon of ASA went along with them, which is really the case, to set up COMINT in the field. They can't really do their job unless this umbilical cord is working and all the tremendous assets of NSA is [sic] pumped into the platoon—and the take of the platoon is pumped back here. And this is working, I think... (B% When I left), it was working very well. I think it still is, isn't it?
- Buffham:** Worked very well in the case of the Dominican...
- Davis:** Dominican Republic.
- Buffham:** Republic operation.
- Davis:** Yeah, that was tremendous, right.
- Buffham:** And I think, today, it's working extremely well in Southeast Asia.
- Davis:** Southeast Asia is a perfect case where...
- Canine:** I was going to say that's a perfect case.
- Davis:** Yes. But this was all started back, really, in the days we're talking about.
- David:** In those days...
- Canine:** Let me tell you why I got involved in this thing. I made a trip to Korea. I went to Panmunjom in the fall of... in the s... right after I took the Director's job here. I went... The I Corps was at Panmunjom. I guess they probably still are, aren't they? And...
- Davis:** Uijeongbu, but they control Panmunjom, yeah. ((Whispering heard in the background.))
- Canine:** Wait... Was...?
- Buffham?:** ((He's heard in the background quietly saying:)) (1-2B) I see you looking around...
- U/I Male:** ((In a whisper:)) (3-4B) both of them.
- Canine:** I Corps Chief of Staff was an old pal of mine. And he complained that he wasn't getting any stuff. And I said, "Well..." He said, "Why don't you go

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and tell those guys.” And I said, “Well, I’ll go and tell them, but I don’t... I can’t guarantee that you’ll get it.” ((He chuckles.)) And I went down and said... He said, “Who told you to tell me this?” And I said, “Nobody told me to you. I’m just telling you.” ((Laughter heard.)) Well, I went back, I guess, about Christmas time or something like that. No, I never went at Christmas time—maybe just after Christmas. And he said, “I thought I was going to get some stuff.” He said, “Haven’t you been...?” I said, “Haven’t you been getting any?” “Not any more than I used to.” ((He chuckles.)) Then I went back home and did some... started talking about it. And in that case, it was the Army. And I expect I went right over to the Pentagon and G-2, and started talking to somebody. But apparently it’s turned the faucet back off again.

Davis: On the ASA take?

Canine: Yeah.

Davis: Yeah.

Canine: Yeah, on the ASA take. They ran a pretty fair-sized job in Tokyo—and that was only a telephone call to Korea. ((He laughs.))

Davis: Well, you must have really turned it on because I remember you and I going out much later. This must have been ’53 or (‘5)4. And we talked to General (B% Gaither) in Tokyo, and he had been a division commander when the war was on in Korea.

Canine: Mm hmm.

Davis: And he told us that when that little ASA lieutenant came in with his little black book and told him that he was going to be attacked by a regiment in a couple of hours, he would have given him anything he had. And he did this regularly.

Buffham: Well, I think you said something significant, though, there. You said the ASA guy coming in at the division level. You were talking to a corps commander. And the corps commander: his source was all of this SIGINT was our famous SSO friends...

Canine: That’s right.

Davis: Yes, yes! Yeah.

Buffham: Who were, you know, screening everything out.

Davis: Well, yes, you’re right...

Buffham: Whereas at the division level, the ASA was given the direct support, which...

Canine: Mm hmm.

Davis: Direct support.

Buffham: Basically, was [sic] these low-level voice teams...

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Davis: Yes!

Buffham: Monitoring the...both the Korean and the Chinese voice...

Davis: Chinese, yeah.

Buffham: (B% Which was) very valuable.

Canine: And that was the first place I went when I went to Korea, was to go up to one of those low-level voice teams.

Buffham: Level voice teams.

Davis: They were tremendous.

Canine: They were tremendous, that's right.

Buffham: I Corps: there was a blanket in there between the ASA people and the Corps commander and his staff. And we've always had that problem. I think it exists today in Vietnam.

Canine: I expect it...

Davis: YES.

Canine: I expect it still exists in Vietnam.

Buffham: It does.

Davis: Mm hmm.

David: Do you think with communications as fast as it is today...? In the old days in '53, '54, we didn't have the system that we have today and what we're getting. Do you think that this decentralization still has to be applied as it was in the past?

Canine: You still got the same kind of guys in command of the troops out there. And they want information fast.

David: Right now, yeah.

Canine: Right now.

Neff?: And they're getting it.

Davis: Oh, yes. (1-2G)...

Canine: And they get it now.

Davis: Yes, when you take the airborne DF effort out there now...

Canine: Yeah.

Davis: This has to be right... Well, I think you've got it now so it's right from the airplane, the fixes, to the commander in the field.

Buffham: The airplane has the KY-8.

Davis: And it goes right straight out...

Buffham: And they call the ASA direct support unit attached to the brigade or

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division...

Davis: Division, yeah.

Buffham: With their fix information. And the ASA direct support unit then can pass that right into the brigade or division on a real-time basis as the aircraft is making... As they make the fix, that information is sent to the ground so they've got it right away. And the DSU—the Direct Support Unit—can supply—if we have it—the identification...

Davis: Identity, identity, yeah.

Buffham: Of the unit. The identification is still a big problem.

Davis?: Yes.

Buffham: We're only able to identify, in a real-time sense, oh, forty percent of the material.

Davis?: Of the... Yes.

Buffham: We get more into it later on, but...

Canine: But there... As of now, there's not very much we can do to improve it.

Buffham: I hope there's noth... We're doing everything we can think of to improve that identification rate. That's the... one of our major technical problems. And it requires essentially a full solution of the callsign system and an equation of that callsign system to order of battle. It's a tremendous amount of...

Davis: Yes, I don't think the... better communications have changed the requirement for decentralization.

Canine: No, not a bit.

Davis: They just made the support from here much faster and much better and more complete than it ever was.

David: At one time, we were going to use computers to do this real fast feedback. In other words...

Davis: Computer to computer.

David: Have them monitoring callsign changes. And then, as soon as there was a callsign change, the SOLO system, I believe it was called, wasn't it? They were going to have these computers all over. And this would immediately break the callsign... the new callsign system and feed back the information...

Buffham: Well, Steve, we're putting computers in every one of our stations out there. The Army station at Phu Bai will have a computer. The station at Pleiku will have a computer.

David: ((He addresses General Canine:)) This happened under your watch, you know. You said, "I want a computer faster than lightning." So we named the project LIGHTNING.

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Davis?: LIGHTNING, yes.

Canine: Right. ((Chuckling heard.))

David: ((Continues to address General Canine:)) And ((you also said)), "I want to know if you guys are as good as you are, so I want to have a separate, unbiased group working on a problem." And that was called PARALLEL. Do you remember that?

Canine?: Mm hmm.

David: Where unbiased... Without any feedback... feed... exchange between each other, you wanted these two entities to be working side by side with a wall in between, and see if we would have the right attacks. Remember that? ((Laughter heard.))

Canine: And I got the first 20 million dollars to...

David: 21 million. ((Laughter heard.)) 21 million.

Canine: What? Was it 21 million?

David: Yes, sir. ((Other speakers concur.)) ((Laughter heard.))

Canine: Oh, (2-3B). Who would (B% fight) over one million in this racket? ((More laughter heard.))

David: Well, that seems to be one of the biggest decisions and biggest management techniques we had during your time frame. We'll break now and come back in a little bit to talk about the internal problem of resources and work measurement. And we have Paul Neff, the specialist here, who will ((laughter heard))... ((Then audio abruptly stops at this point. When the audio resumes, General Canine is speaking as follows:))

Canine: (I've never) believed anybody when he said how many people it took to do a given job because I found out that he did it finally with about a third of that many people ((laughter heard))—and did a better job ((more laughter heard)). (B% Only)...

David: Well, that's the program he's talking about, General.

Neff: The operating personnel. Of course, you couldn't measure the thought process always.

David: You remember that?

Canine?: Oh, of course.

David: Art Levenson and ((William "Bill")) Lutwiniak and George Vergine and...

Canine: Yeah, all the thinkers. You would have to... You'd have to mention a lot more names than that, Steve.

David: Paul (B% Reimers), I remember you... He was a thinker, and you made him a doer.

Canine: Of course. I was getting...

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David?: (XB by General Canine speaking).

Canine: I was getting fed up with thinkers. I had a million thinkers out here and no doers!

David: ((He chuckles.)) Well, the program that Paul's talking about: did that help at all to justify resources or determine allocations?

Canine: It all depends on who you ask, my friend. It all depends on who you ask. Paul probably would tell you yes. I wasn't at all sure. ((Chuckling heard.))

David: He continued this, you know, when he took over the communication security organization.

Canine: Mm hmm.

David: He had labor distribution and a (4-5B).

Canine: That's easy in communications security. ((Laughter heard.)) They don't have thinkers over there. ((Laughter heard.))

David: I don't know.

Neff: Well, you were interested in using the management consultant firms as well...

Canine: Well, yes, that's right.

Neff: And Anderson-Nichols, at that time, on this particular program.

Canine: Well, but the idea came from McKinsey and Com... (B% John Corson) of McKinsey and Company.

Neff: Yes, well, you were interested in all management areas—including organization, by the way.

Canine: Mm hmm. ((Others as well acknowledge.))

Neff: And you did hire McKinsey to do the organization study, as I recall.

Canine: Yeah.

Neff: And for your information, the... our present Director, General Carter, has been taking a look at organization over the last several months.

David: Paul is the chairman of this (XB by General Canine speaking).

Neff: Yes.

Canine: Every director periodically does that. Just ask Jack.

Davis: That's right. ((Laughter heard.)) NSA is forever reorganizing. ((More chuckling heard.))

Canine: All Army organizations are continually reorganizing. That's one of the advantages of the Army system of rotation.

Davis?: Gets some new blood in there.

Canine: They get some new blood in there.

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- David:** But don't you have to reorganize to meet the needs as they change from day to day?
- Canine:** Well, I don't... I wouldn't say that you have to reorganize. You ought to be organized so that you can...
- Davis?:** Meet the needs.
- Canine:** Meet the needs without reorganizing. The Army ought to be organized in peace time—every element of it—so that they... when the gun goes off, they charge.
- David:** This is terrific if you can anticipate the kind of war and where the enemy's going to attack with what kind of equipment and manpower and whatnot.
- Canine:** Theoretically, it doesn't make that much difference.
- David:** Theoretically. But actually, it does, right?
- Canine:** Well, it all depends on whom you ask.
- David:** Well, we have a strike force now in the Army.
- Canine:** Yeah.
- David:** Your time, they didn't have a strike force.
- Canine:** No...
- David:** The Marines took care of it. But the kind of warfare...
- Canine:** What do you mean the Marines took care of it? ((Chuckling heard.))
- David:** Well, they were supposed to take care of it. ((More laughter heard.))
- Canine:** Let's keep this on a high level. ((Laughter heard.))
- Buffham:** I'd like to tell a little anecdote about reorganization in NSA. This was prior to the big study that McKinsey and Company did. But there are always periodic reorganizations in the SIGINT part of the activity. And General Canine had asked the people in the Production organization to give him their views on a reorganization of the... of what was then Production. So I remember this... One day, I was working in Plans and Policies—the staff at the time. And I was told to be in General Canine's office because they were coming over from PROD with the reorganization, and General Canine wanted a group of people to hear this. So they came in with their charts, and the briefer was Captain Ham Wright.
- Canine:** ((He chuckles.)) God bless him!
- Buffham:** And he set up all the charts, and General Canine... This was a typical session in his office. He was sitting behind his desk and I... Actually, I think he had his feet up there, sort of peering at him between his feet.
- David?:** Glaring at him. ((He chuckles.))
- Buffham:** Glaring at him. ((He laughs.)) And they started on this explanation of how they were going to reorganize PROD. Well, General Canine started

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asking some questions, and pretty soon, Captain Wright sort of retired from the battlefield. But the principal staff officer, sort of, in the Production organization at that time was a fellow named Phil Patton.

David?: Big talker.

Buffham: And Phil...

David?: Big talker.

Buffham: Oh, yeah. And Phil...

David?: Yeah.

Buffham: Phil rushed into the breach and he went on for about five minutes with his very elegant presentation of why they wanted to make this particular reorganization. And General Canine was very interested in the presentation. He was just staring at Phil between his feet. And finally, he just interrupted him and he said, "Excuse me, ladies." He said, "Horse shit, Patton!" ((Laughter heard.)) Well, Phil just collapsed right there. And the rest of us...

David?: (B% Fell)...

Buffham: Didn't exactly know what to do. And then, everybody realized that the General had sort of put in one pithy statement a very good appreciation of what was wrong about that reorganization. They retired with their charts. I barely got across the hall to Plans and Policies. I... Just a... And I never saw Phil so overcome. He was completely deflated. ((Laughter heard.)) And that was a... That ended that bit of the reorganization. Later on, came the overall Agency structure and the Corson people and the McKinsey people. Do you remember that session, General Canine? It was...

Canine: No, I had a good many like that. ((Laughter heard.)) I can't single out any par... any ((he chuckles))...

David: Paul, can you very briefly describe the reorganization that you're proposing to General Carter? You have a panel now that's been meeting periodically.

Neff: Yes, I (XB by someone sneezing).

David: You're the chairman. And you've made a recommendation. And let's keep Buffham quiet. ((Laughter heard.)) We'll keep Buffham quiet, and you... Can you just recap for General Canine here just what we're (4B by Mr. Neff speaking)...?

Neff: No, I'm not at liberty to do that today.

Davis?: What was the reorganization, though, that came about during this time frame we're talking about...? Let's see, after the 70-90 split, wasn't it? I mean...

Buffham: Well, this was before the 70-90...

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Davis: The... Before the... ?

David: This was a small (B% one that he's talking about).

Davis?: Oh, this was before... the one that Buff's talking about.

Neff: Well, we didn't have any major one after that until I guess it was '61.

Davis?: 19... Yes, '61.

David: Corson in '57.

Neff: Yeah.

David: The 70-90 split was in, what, '57, '58?

Buffham: That's... That was McKinsey. That was the one that set up the 70-90 approach.

Neff?: Right.

Davis?: The McKinsey Report?

Buffham: And that's when you sent Lou Tordella over, who had then, up to that point, been mostly in staff work, I guess it...

Canine: He'd been across all...

Buffham: He became the chief of 70. ((Acknowledgements heard.)) You know, he'd been one of the consultants in the...

Neff: Well, mentioning Lou reminds of the tremendous interest that General Canine had in personnel management programs, particularly in the educational area. You got us our first slots at the Service schools. In fact, Dr. Tordella was our first Agency employee at the National War College.

Canine?: That's right. ((Acknowledgements heard.))

David: Didn't Sinkov go? He was sent...

Neff: He went the following year.

Canine: He went the next time.

Neff: That's when I went to the Industrial College...

David: Right, right.

Neff: For the first time.

David: You're a graduate of the National War College, I remember.

Buffham: I went after Dr. Sinkov.

David?: Yeah, these billets have been available ever since.

U/I Male: Yeah, well, it was a terrific...

David: But we also got Harvard at that time.

Neff: Yes, we got Harvard.

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- David:** We got Harvard.
- Neff:** I remember General Canine's phrase: "The executive workforce was going to be three deep." Three deep. But that is...
- David:** We're still working on number two deep! ((Laughter heard.)) We're still working on it right now. In the School, I think we have a charge, and we have recently established a new course. You wanted a staff officer course for cryptologic officers—way back in your time. ((Col. Shelby, Chief of Training,)) Patterson did set up one, but it was a one-year course. And you'd find the Colonel in the back room trying to break a code; working on traffic and performing traffic... It was too much skill and not enough management. So that course that you started sort of petered out. And today, we have in the School, a national senior cryptologic course, which does just what you wanted... what you thought was necessary in the system. And that's pretty successful, don't you think?
- Neff?:** Oh, absolutely!
- David:** You lecture at it...
- Buffham?:** Mm hmm.
- David:** And you lecture at it. And you've been invited to participate.
- Davis?:** Yeah.
- David:** It's one of the better courses that we have today. Besides training, do you think anything else...? There... Is there anything else that, as you look back and see the Agency today, that we should be doing? Or...
- Canine:** Oh, now, let's keep this, *again*, on a high level. ((Laughter heard.)) I...
- David:** Besides firing the people?
- Canine:** I didn't come out here to give advice to General Carter. ((Chuckling heard.)) I... I've tried not to give any of the new Dir... of the succeeding Directors from me advice.
- David:** Right. There's one thing you did which makes it much easier for the present Directors after... those that came after you. You changed many military billets for civilian billets, and you kept the pro here and... Was that the basic reason for this...?
- Canine:** This is a funny place. People are either born good cryptanalysts or they ain't—and you can't *make* them first class cryptanalysts—I mean, top cryptanalyst, like Bill Friedman was—unless you breed them. You can make... Management... Managers are much the same way. And we have been for... from time immemorial—since I've been... was around here—hiring potential cryptanalysts. And I hired a whole bunch of psychologists, trying to find out what would be the things that we'd look for. And I spent... I wasted a lot of money. ((Laughter heard.))
- David:** Never did find out, eh?

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Canine: I never did find out. ((Laughter heard.))

David: They're coming close, as I understand (XB by simultaneous speaking)?

Neff: But we found out you couldn't find out anyway.

Davis?: Yeah.

Canine: Yeah, we found out you couldn't find out.

David: There are certain traits, though, that you *can* look for...

Canine: Well...

David: Like mathematics maybe.

Canine: You're saying now that...hire mathematicians. I found out that some of my best cryptanalysts couldn't even add their own checkbook. ((Laughter heard.))

Buffham?: Well, right. You're right. ((More chuckling heard.))

Canine: And... So I don't know. You... It's like the blind leading the blind, I suppose. ((He pauses.)) But you can improve cryptanalysts, I found out. They... Some of them got better; some got worse.

David: Is this a "natural" cryptanalyst versus the one who you can bring up almost to that point, but not with the genius?

Canine: The genius you have to breed into the guy. You can improve cryptanalysts. I don't know whether I see any cryp...real geniuses...

Davis?: Yeah ((laughter heard)), or in the present company, huh?

U/I Male: Thank you very much. ((More laughter.))

Canine: I was just looking around to be sure I didn't insult anybody here. ((More laughter heard.)) But I wanted to improve cryptanalysts. I also wanted to improve the management. You have to work with what you got in the place—I found that out. It was no use battering your head against a stone wall. You couldn't go out and hire a super duper manager. We had... I had one issued to me at one point in time as a deputy director. He was a good... He had learned his management from CBS. And he was good, but he wasn't good for me.

David: Hmm. Was...?

Canine: He wasn't good for me.

Buffham: Joe Ream.

David: Joe Ream.

Canine: Joe Ream.

David: He didn't have the experience in the Organization.

Canine: You have to...

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- Davis?:** (XB) know something about the...
- Canine:** You have to know something about...
- Davis?:** Yeah.
- Canine:** That's what I found out after I'd been here about 15 minutes. You have to know some of the words that these guys use, or you can't conduct a conversation with them. ((Laughter heard.)) And you have...
- David:** Mm hmm, that is important.
- Canine:** And you have to know approximately. You don't know... need to know exactly. You don't need to take one of those cross-hatch sheets and come out with the right answer at the bottom. But you got to at least know what the gal is doing when she's putting those... get things down.
- David:** You got to understand the function.
- Canine:** You got to understand the... not the function—I knew that when I got here.
- David:** The skill is what you mean... You can't ever recognize or do the skill, but you can understand how this fits to this to this to that.
- Canine:** You can m... Exactly, exactly. You can understand the language the guys and girls use...
- David:** Yeah.
- Canine:** Or are using. You have to be able to conduct an intelligent conversation. They don't need to know how unintelligent it is on your standpoint. ((Laughter heard.))
- David:** And you don't have to necessarily know how to do it either.
- Canine:** No.
- David:** No.
- Canine:** Oh, of course not.
- David:** Yeah.
- Canine:** Bill Friedman tried to teach me, and I gave up after the first lesson. ((Laughter heard.))
- David:** You started the first Executive Development Course, too—the program...
- Canine:** Exactly.
- David:** Back in those (B% days).
- Canine:** I found out that you had to train the people that were executives that you had in your hand.
- David:** Yeah.
- Canine:** Some of them I later moved on to other places. If they were geniuses as

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cryptanalysts, why, they... I knew what to do about them. You had to get them out of the management thing; or you had to... hierarchy; or you had to give them somebody that could do their work and... so that they didn't know that somebody else was doing their work.

Davis: I remember shortly after I got here, the General was talking to me one day about his experience when he first took over. And he said that a bunch of the "long hairs" came in and started to give him a bunch of baloney. And he didn't mind this because he expected it. But he said, "You know, Jack..." He said, "Those guys that come in here and believe their own baloney, they're dangerous." ((Laughter heard.)) He was always trying to sort out who believed their own baloney.

Canine: That's the number one job of management in this place: find out the guys that don't know anything about it, but still believe what they're telling you. What is known in the Army as a "snow job".

Davis: That's right, a snow job. ((More laughter heard.))

Buffham: Well, I think when you first came here, General, we were... we had a lot of good cryptanalysts and we had a lot of good linguists, but everybody was pretty inbred in this narrow little world. And the impact of all these things—like executive development and sending people off to school and... Even such things as the Work Measurement Program: it was really designed to open people's eyes and let them see that there was something else to the world except that... beyond that piece that they were working on. ((TR NOTE: Several speakers talking simultaneously.))

Canine: Exactly.

Buffham: And I think that was the big impact of all these programs: to broaden the people and the scope of the Agency.

Canine: I'm not so sure that the first thing that I did that had some impact was to change the rule that if you... somebody asked your wife... downtown or where you worked for credit or something like that... that you could tell her that you work for NSA.

David: Yeah, that's (1B)...

Canine: The normal thing in classified agencies is to tell them... tell their... order their people to say: "We work for the U.S. Government." Well, anybody... All you have to do is take a camera or one of those things that you count how many cars go by. Anybody can find out who is going in and out of the gate. ((Acknowledgements heard.)) You got two fences—that's bad for the people that... And you have to give them some return that'll make them forget for a while that they work like convicts.

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David: That was a big change you made. And there was another change you made where Civil Service, at the time, wouldn't pay high grades for a worker, but would for a supervisor. Remember the old days ((acknowledgements heard)) when you had to... To promote somebody, you had to put them in charge of something. Well, here's a wonderful cryptanalyst who doesn't know how to manage anybody...

Canine: Or never will.

David: Never will, but he *loves* to sit down with a piece of paper.

Canine: Mm hmm.

David: And you found... I think you began the procedure whereby you justified and supported being able to pay highly trained technicians ...

Canine: You got to... You could get to be a P-38 without ever managing anybody.

David: Yeah.

U/I Male: Yes.

Neff: You got our super grades for us.

U/I Male: Super grades, too. A big breakthrough in super grade...

Neff?: Right, right. This was a big breakthrough...

David: Right.

Neff: But you...

Canine: We didn't get so many super grades. It was that special law... one of...

Neff: Oh, 313...

David: 313.

Neff: Public Law 313.

U/I Male: PL-313.

Canine: PL-313 ((acknowledgements heard)), that's what we got.

U/I Male: Yeah.

Neff?: Yeah, that was the one.

Canine: And they didn't have to supervise anybody. They didn't even know how to add up their checkbooks.

U/I Male: Yes.

Neff: The R&D types, the law was designed for—that's right.

Canine: Yeah. ((Others acknowledge as well.)) Yeah, but we use it for cryppies, too.

U/I Voice: All right, (XB by others agreeing and acknowledging)).

David: Well, I think it fit them very well, didn't it?

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U/I Male: Mm hmm.

Neff: But you mention the fence. It reminds me of this very building we're in now and the interest you had in so many of the modern management techniques. For example: your interest in whether we should have music or not and where. ((Laughter heard.)) And color! Color!

U/I Male: Yeah, color.

Neff: We had to go to New York and consult with the best color engineer in the country because you wanted soft colors in the cool corners of the building...

David: I remember that.

Neff: And cool colors in the warm corners of the building. Do you recall that?

Canine: Yeah, well...

Davis: And CIA picked that up in their new building—you know, that same...

David: They must have some (XB).

Neff: After that, everyone consulted with us on buildings.

Canine: Yeah, that's right. ((Other speakers acknowledge as well.))

Neff: "Crypto buildings," (B% I call)... ((Laughter heard.))

Canine: As a matter of fact, the first job I had after I was... after I left... was retired was to be a consultant for about 20 minutes to DIA ((laughter heard)) in this new building that they're supposed to be putting up.

Neff: They wasted your time. They lose it every year in front of Congress.

Canine: Well, I left. I took... They weren't about to take my view... my recommendations. ((Chuckling heard.))

Neff: Gee, it's too bad.

Canine: So I quit.

Neff: You would have been on their payroll, even through now—and maybe for another five years. ((Chuckling heard.))

Canine: You can't... You have to give up part of your retired pay if you work for the Government.

Neff: Oh.

Davis?: Yeah, that's right. ((He chuckles.))

Canine: I was doing better at Burroughs and the University of Michigan and Radiation—and places like that. ((Acknowledgements heard.))

David: General Davis, would you...? Looking back in history, when you left here, this... do you feel that this was probably the real emphasis in the whole agency, and set the style during General Canine's time...?

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Davis: Oh, yes, without a doubt. You see, General Canine and I had fought World War II together in General Patton's 3rd Army. And I never will forget when I was graduating from the War College. And the troops from Washington came up to tell the graduates where they were going. This was in 1953. And they told me I was coming to NSA. And they didn't know what NSA was, nor did anyone else up there know what it ((chuckling heard))...

David?: Yeah.

Davis: Of course, this doesn't prevail today. But I finally found out that General Canine was the Director of NSA. So I got on the phone to Washington and called him and asked him what this was all about. And, of course, in typical "Canine-ese", he said, "Never mind, Jack. Get your Jeep, draw your rations, get a map, and come on down here. ((Laughter heard.)) I didn't know what it was all about either!" It started me out on the first of two tours with NSA.

David: That *can* happen now, you know. General Carter has directed that he or somebody will give talks to all the senior Service schools about NSA and what they do; and give them an idea of how we can support them better when they become big commanders in the field.

Davis: And this was started, too, when General Canine was the Director...

David: Yes.

Davis: Of going around—and also did the major commands. I think as part of the decentralization program...

David: Right, right.

Davis: We took briefing teams and went all over the world, and talked to the commanders.

David: History repeats itself. We're now talking about road shows.

Davis: Yes, road shows, that's right! We went on road shows and...

David: We're talking about developing a road show to send to all the major unified and specified commands about NSA and about the COMSEC. Separate organizations going out to brief people like this. We've got about one minute to wrap this up. Again, we appreciate you taking your time out from your busy schedule at home in the garden.

Canine: I enjoyed this.

Buffham: Yeah.

Canine: I enjoyed this. You make me remember things that I had plumb forgot. ((Laughter heard.))

David: And it's a joy to remember them again, huh?

Canine: Yes, some of them, it's a joy to remember. Some, it isn't. ((Laughter

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heard.))

Buffham: It was a traumatic experience while it was going on, but it's good to remember. But I ((laughter heard))...

Canine: Well, some of my mistakes, I'd rather forget. ((More chuckling heard.))

David: Well, this is the reason we're documenting this and capturing the time, your personality, and some of the people that worked with you. So that we can relive these nice moments ((acknowledgements heard)) and some of the mistakes that we made. And keep some of our...

U/I Male: And we made (2-3B by others speaking)...

U/I Male: Yeah.

David: And this is a... to give people who see these films in the future an idea of how difficult and how pleasant, depending on where you were sitting.

Buffham?: Yes, (XB). ((Laughter heard.))

Canine: Now, let's keep it on the high level again. ((More laughter heard.))

David: Alright, now... I think that's enough for now. ((Chuckling heard.))
((TR NOTE: Audio abruptly stops here.))

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